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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,240	02/22/2002	Bjorn Kruse	1807-0159P	7899
2292	7590	01/06/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			STREGE, JOHN B	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/069,240

Applicant(s)

KRUSE, BJORN

Examiner

John B Strege

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/22/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the unlabeled rectangular boxes shown in figure 1 of the drawings should be provided with descriptive text labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 8 is objected to because of the following informalities: Claim 8 is an arrangement claim however it is dependent on the method claim 6. It appears that the Applicant meant for the claim to be dependent on claim 7 which is the corresponding

arrangement claim. If this is not the case and the claim was meant to be dependent on claim 6 then a 112 second paragraph rejection would be proper. For examining purposes the Examiner will assume that claim 8 is dependent on claim 7. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

5. Claim 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent

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protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 3 (lines 5-6) discloses, "which information has preferably been registered according to the method in claim 1".

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driscoll, Jr. et al. USPN 5,067,162 (hereinafter "Driscoll") in view of Schiller et al. USPN 4,581,760 (hereinafter "Schiller").

Driscoll discloses a method for registering fingerprint information (col. 2 lines 30-60) via a sensing surface A (20 of figure 5) against or over at least which surface a finger (22 of figure 5) can be held. Driscoll further subdividing the fingerprint image into

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relatively small areas denoted as candidate reference sections and analyzing each candidate reference section to determine its level of local distinctiveness and repeatability, and the most distinct and repeatable reference sections are selected for use in characterizing that fingerprint and the positional coordinates of all the acceptable candidate references are stored (col. 10 lines 7-19, and paragraph bridging cols. 13-14). All the candidate reference images that make up the fingerprint image are copied into a working area of the memory thus are registered (col. 11 lines 10-12). As seen in figures 8 and 11, the uniqueness of each candidate reference section 94 is determined within its surrounding area 96. Here the fingerprint image 80 is read as A, the surrounding areas 96 are read as A' and the candidate reference sections 94 are read as A''.

Driscoll does not explicitly disclose that the center point of each candidate reference section 94 is used in determining the uniqueness, however as discussed if the reference section 94 (read as A'') is determined to be unique then the positional coordinate of the reference section is stored. Although Driscoll does not explicitly state that the center point of the reference section is used as the coordinate for the position it is well known in the art of fingerprint verification to use the center point or gravity point of a section in defining the position of the section as shown by Schiller. Thus it is obvious that the center of the reference section is also used in order to determine the uniqueness of the reference section.

Schiller discloses a fingerprint verification method very similar to that of Driscoll in which the fingerprint is segmented and a distinctive reference area is selected.

Specifically Schiller teaches that the position of the reference section which are distinct are assigned to the center of the reference block (col. 4 lines 34-49).

Driscoll and Schiller are analogous art because they are from the same field of endeavor of fingerprint verification by subdividing the fingerprint and using reference sections.

At the time of the invention it would have been obvious to one of ordinary skill in the art to define the position of the reference section as the center point of the section. The motivation for doing so is that the center forms the gravity point which makes the section easy to align in order to carry out verification as shown by Schiller. Thus it would have been obvious to one of ordinary skill in the art to combine Driscoll and Schiller to obtain the invention as specified in claim 1.

Regarding claim 2, Driscoll discloses that if the candidate reference sections are acceptable then they are store in a template for use later in verification (col. 10 lines 1-19).

Regarding claim 3, Driscoll discloses a verification stage where the template data received from the enrollment stage is aligned with respect to the fingerprint image to be verified (col. 16 lines 38-55). Once all of the reference sections have been located and their correlation values have been computed, an evaluation of the correlation values and corrected displacements is then performed to determine whether whether to verify or reject the person seeking access as the enrolled person wherein each reference section is classified as a hit or a miss according to its correlation value and displacement. Preferably, if the number of hits exceeds a predetermined threshold, such

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as one half of the number of reference sections in the template, then the verification is successful, if not the person is rejected (paragraph bridging cols. 17-18). Driscoll further discloses that an alternative method would be to perform the best match search in a reduced area and then if the correlation value is not high enough further processing by expanding the area in stages (col. 18 lines 26-42).

Regarding claim 4, Driscoll discloses carrying out a rotational correction to cancel out rotational misalignment (col. 17 lines 15-52).

Claims 7 and 9 are similar to claims 1 and 3 except claim 7 and 9 are arrangement claims and claims 7 and 9 also discloses a power source. Driscoll discloses a method and apparatus thus the same arguments used for claims 1 and 3 apply equally to claims 7 and 9. Although Driscoll does not explicitly disclose a power source, it is inherent that the disclosed device must have a power source.

Claim 8 as interpreted by the Examiner is similar to claim 2, thus the same arguments used for the rejection of claim 2 apply equally to claim 8.

Claim 10 is similar to claim 4, thus the same arguments used for claim 4 apply equally to claim 10.

8. Claims 5-6, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driscoll, Jr. et al. USPN 5,067,162 (hereinafter "Driscoll") in view of Schiller et al. USPN 4,581,760 (hereinafter "Schiller") and further in view of Brumbley et al. USPN 5,982,913 (hereinafter "Brumbley").



Claim 5-6 are dependent on claims 3 or 4 both of which were rejected above by the combination of Driscoll and Schiller.

Driscoll nor Schiller expressly disclose finding the mean value of the coordinates for the points in the verification stage or selecting the points in the group which have the smallest distance to the mean value point.

Brumbley discloses a method of verification using a subset of claimant's fingerprints which incorporates by reference the inventions disclosed by Driscoll (col. 2 lines 46-60) and the invention by Schiller (col. 2 lines 3-20). As seen in figure 1 Brumbley discloses generating a correlation score for each segment (numeral 6), recording correlation location of each segment (numeral 7), calculating distance error for each combination of segments (numeral 8), calculating an average distance error (numeral 9), generating a verification vector based on correlation scores and average distance error (numeral 10), establishing a threshold vector (numeral 11), and comparing verification vector to threshold vector to determine if claimant is the enrollee claimant claims to be (numeral 12). The advantage of Brumbley's method is that only a portion of the fingerprint image of the claimant is necessary (col. 3 lines 32-37).

Driscoll, Schiller, and Brumbley are analogous art because they are all from the same field of endeavor of fingerprint verification and are further all incorporated by reference by Brumbley. At the time of the invention it would have been obvious to one of ordinary skill in the art to combine Driscoll, Schiller, and Brumbley find the mean value of the coordinates for the points in the verification stage or selecting the points in the group which have the smallest distance to the mean value point. The advantage for

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doing so is that only a portion of the claimant's fingerprint is necessary. Thus it would have been obvious to one of ordinary skill in the art to combine Driscoll, Schiller, and Brumbley to obtain the invention as specified in claims 5-6.

Claims 11-12 are similar to claims 5-6 except claims 11-12 are arrangement claims. Thus the same argument applied for claims 5-6 apply equally to claims 11-12. As discussed previously the power supply is inherent.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,917,928 discloses a system and method for automatically verifying identity of a subject. See figures 6-9.

USPN 6,314,196 discloses a fingerprint registering method and checking device. See figure 36 especially.

### ***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B Strege whose telephone number is (703) 305-8679. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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